

B.Sc. DEGREE END SEMESTER EXAMINATION - MARCH 2024**SEMESTER 6 : ZOOLOGY****COURSE : 19U6CRZOO09 - REPRODUCTIVE AND DEVELOPMENTAL BIOLOGY***(For Regular 2021 Admission and Supplementary 2020/2019 Admissions)*

Time : Three Hours

Max. Marks: 60

PART A**Answer All (1 mark each)**

1. What is an Organizer?
2. State the theory of preformation.
3. Define corpus leutum .
4. Define nebenkern.
5. Name the protozoan which causes Toxoplasmosis.
6. Give examples for Radial cleavage and Superficial Cleavage .?
7. What happens in the 10th division of Drosophila?
8. What are the main components of a chick egg?

(1 x 8 = 8)**PART B****Answer any 6 (2 marks each)**

9. Comment on the additional embryonic membranes found in the chick embryo?
10. Explain the regenerative mechanism of the healing of the wound.
11. Describe the key glands in the male reproductive system.
12. Comment on embryonic induction.
13. Analyze the significance of middle piece in the structure of human sperm.
14. Write about segment polarity gene with examples.
15. Write about Parvo infection.
16. What is capacitation? Mention its significance in mammalian fertilization.

(2 x 6 = 12)**PART C****Answer any 4 (4 marks each)**

17. Reflect on the influence of yolk in the development.
18. Write a brief note on frog blastulation.
19. Explain the gastrulation of chick ?
20. What will happen if the ultrabithorax/T3 gene is mutated in Drosophila?
21. Enlist the types of cloning. Specify the risk factors of cloning.
22. Explain various methods used in construction of fate maps.

(4 x 4 = 16)**PART D****Answer any 2 (12 marks each)**

23. Discuss the significance of gray crescent region providing the experimental evidences of Spemann.
24. Write about the frog's cleavage, blastulation, and gastrulation.
25. Prepare a detailed essay on the classification of eggs. Use neat illustrations.
26. What is the menstrual cycle and what are the phases of it?

(12 x 2 = 24)